**Serial No.**: 09/500,555 **Filed**: February 9, 2000

## **Version Showing Changes in the Amendment**

- 1. (amended) An array composition comprising:
  - a) a substrate with a surface comprising discrete sites; [and]
  - b) a population of microspheres comprising at least a first and a second subpopulation, wherein each subpopulation comprises a bioactive agent; and
  - c) at least one fiducial, [;]
  - wherein said microspheres are distributed on said surface.
- 3. (amended) An array composition according to claim 1 wherein each subpopulation comprises an identifier binding ligand that will bind a decoder binding ligand for identification and elucidation of the bioactive agent. [such that the identification of the bioactive agent can be elucidated.]
- 19. (amended) A method according to claim 18 wherein said subpopulations further comprise an identifier binding ligand that will bind a decoder binding ligand for identification and elucidation of the bioactive agent. [such that the identification of the bioactive agent can be elucidated.]
- 20. (amended) A method according to claim 18 wherein said subpopulations further comprise an optical signature <u>for identification and elucidation of the bioactive agent.</u>[such that the identification of the bioactive agent can be elucidated.]
- 28. (new) A composition according to claim 1, wherein said discrete sites are wells.
- 29. (new) A composition according to claim 1, wherein said microspheres are randomly distributed on said substrate.
- 30. (new) A method according to claim 18, wherein said discrete sites are wells.
- 31. (new) A method according to claim 18, wherein said microspheres are randomly distributed on said substrate.